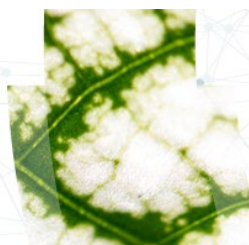


# Frontiers in physical chemistry for lignin valorisation

10–12 September 2025 | London, UK



## Faraday Discussions

### Wednesday 10 September

11:00	Registration
12:00	Lunch
12:45	<b>Welcome and introductions</b> Roberto Rinaldi, <i>Chair of Scientific Committee</i>
12:55	<b>Outline of Discussion format</b> Konoya Das and Sophie Mander, <i>Royal Society of Chemistry Publishing Editors</i>
13:00	<b>Introductory Lecture – Spiers Memorial Lecture</b> (Session chair: Claudia Crestini) <b>Organic, physical &amp; polymer aspects pivotal in lignin valorization</b> Dimitris Argyropoulos <i>North Carolina State University, USA</i>
	<b>Session 1 Native lignin solvation and extraction</b> (Session chair: Seema Singh)
14:00	<b>Title tbc</b> Martin Lawoko <i>KTH Royal Institute of Technology, Sweden</i>
14:05	<b>Analyzing <math>\pi</math>-<math>\pi</math> stacking interactions in lignin nanoparticles from molecular simulations – insights and lessons learned</b> Malin Wohler <i>Uppsala Universitet, Sweden</i>
14:10	<b>Comparison of bottom-up and top-down precipitation strategies for lignin nanoparticles obtention from organosolv and ionosolv eucalyptus globulus liquors</b> Victoria Rigual <i>Complutense University of Madrid, Spain</i>
14:15	Discussion
15:30	Refreshments
16:00	<b>Bond dissociation energies of lignin-carbohydrate complexes</b> Thomas Elder <i>USDA-Forest Service, Southern Research Station, USA</i>
16:05	<b>Organosolv processing of Sitka Spruce sawdust: Large scale preparation of native-like lignin and LigninOX for valorisation</b> Nicholas Westwood <i>St Andrews, UK</i>
16:10	<b>Supramolecular interactions in softwood kraft lignin nanoparticles</b> Massimo Sgarzi, Massimo <i>Ca' Foscari University of Venice, Italy</i>
16:15	Discussion
17:30	Lightning presentations (by invitation of the Scientific Committee)
18:00	Poster session and wine reception
19:30	Close of sessions

Thursday 11 September

	<b>Session 2 - Lignin stabilisation and degradation in lignocellulosic fractionation processes</b> (Session chair: Roberto Rinaldi)
09:00	<b>Title tbc</b> Huizhen Liu <i>Chinese Academy of Sciences, China</i>
09:05	<b>Catalytic lignin conversion for holistic valorization</b> Ning Li; Feng Wang <i>Dalian Institute of Chemistry Physics, China</i>
09:10	<b>Investigation of the electro-oxidation of lignin model compounds using in situ ATR-IR spectroscopy with a chamber-separated cell</b> Sibylle Schwartzmann <i>ICC, Utrecht University, The Netherlands</i>
09:15	Discussion
10:30	Refreshments
11:00	<b>Title tbc</b> Heiko Lange <i>University of Milano-Bicocca, Italy</i>
11:05	<b>Advancing biomass conversion: insights into lignin and hemicellulose dynamics via MultiCP quantitative solid-state NMR</b> Guan Jianyu; Leu Shaoyuan <i>The Hong Kong Polytechnic University, Hong Kong</i>
11:10	<b>Predictive modeling and optimization of lignin yield and quality in Birchwood ethanosolv fractionation in a semi-continuous flow-through reactor</b> Amponsah Preko Appiah; Peter J Deuss <i>University of Groningen, The Netherlands</i>
11:15	Discussion
12:30	Lunch
	<b>Session 3 - Commercially available technical lignins</b> (Session chair: Claudia Crestini)
13:30	<b>Title tbc</b> Joseph Samec <i>Stockholm University, Sweden</i>
13:35	<b>Lignin-alcohol blends as sustainable marine fuel and feedstock for fluid catalytic crackers</b> Michael Boot <i>Vertoro, The Netherlands</i>
13:40	<b>Understanding structure-property relationships in lignin-derived carbon nanofibers for freestanding supercapacitor electrodes</b> Robert Hunter <i>Imperial College London, UK</i>
13:45	Discussion
15:00	Refreshments
15:30	<b>Paving the way for understanding the role of lignin molecular weight</b> Veronica Calado <i>Federal University of Rio de Janeiro, Brazil</i>
15:35	<b>From dark to light: Light-coloured lignin for cultural heritage conservation</b> Camila Alves Rezende <i>University of Campinas – UNICAMP, Brazil</i>
15:40	<b>The use of kraft lignin to enhance nanocellulose films properties</b> Raquel Martín-Sampedro; Antonio Ovejero-Pérez <i>Institute of Forest Science (INIA-CSIC), Spain</i>
15:45	Discussion
17:00	Close of sessions
18:30	Pre-dinner drinks
19:00	Conference dinner

**Friday 12 September**

	<b>Session 4 - Strategies for compatibilisation of extracted lignin properties with commercial applications</b> (Session chair: Jean-Pierre Lindner)
09:00	<b>Lignin as Bisphenol-A replacement in epoxy resins: challenges and opportunities</b> Mojgan Nejad <i>Michigan State University, USA</i>
09:05	<b>Advancing the fundamentals of water dynamics in lignin-based epoxy anticorrosive coatings</b> Narayanan Rajagopalan <i>CoaST - Denmark Technical University (DTU), Denmark</i>
09:10	<b>Controllable synthesis of lignin-derived graphene-like carbon materials for electrochemical energy applications</b> Xiaoyu Wu; Wenting Liu <i>Shenzhen Polytechnic University, China</i>
09:15	Discussion
10:30	Refreshments
11:00	<b>Title tbc</b> Agnieszka Talbot <i>Imperials College London, UK</i>
11:05	<b>Enhanced antioxidant properties of lignin-modified silver nanoparticles with plasmonic photothermal activation</b> Leonidas Matsakas <i>Luleå University of Technology, Sweden</i>
11:10	<b>Tuning ester derivatives of organosolv vs technical lignin for improved thermoplastic materials</b> Yevgen Karpichev <i>Tallinn University of Technology (TalTech), Estonia</i>
11:15	Discussion
12:30	<b>Concluding remarks lecture</b> (Session chair: Roberto Rinaldi) Katalin Barta <i>University of Graz, Austria</i>
13:00	<b>Acknowledgements</b>
13:15	<b>Close of meeting and lunch</b>

Please note that this is a draft programme and timings may change.